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ABSTRACT

This article suggests a method for determining and depicting language dominance through the use of parallel tests of aural ability in two languages. In addition, the use of a two-dimensional graph consisting of the proficiency levels within each language appears fruitful as a means of depicting such dominance scores in the initial placement of pupils into instructional groupings. However, the complexity of human behavior across a dual language matrix as well as the limitations of brief group testing preclude anything more than a tentative judgment with respect to any pupil's language dominance, which should be verified by subsequent diagnostic testing and prescriptive teaching. Given the restricted resources of the typical educational setting, the circumspect use of such a method offers a simple and systematic starting point for pupil placement and programmatic progress. (Author/SK)

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A Method for Determining and Depicting Language Dominance

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A Method for Determining and Depicting Language Dominance

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There has been a rebirth of bilingual education programs in the United States in recent years. Increasing infusions of federal funds from such sources as Titles I, III, VII, and VIII of the Elementary and Secondary Education Act (ESEA) have supplemented local and state support to stimulate the growth of such programs. Title VII of ESEA, known as the Bilingual Education Act, alone accounts presently for over 300 bilingual programs. The vast majority of these projects involve Spanish-speaking students on the elementary school level.

The geometric growth of such programs has created a pressing need for practical instrumentation to determine the degree of bilingualism among students who have been variously and vaguely designated as "non-English-speaking," "Spanish-speaking," "Spanish-surnamed,"* "Spanish-language-oriented,"[1] and "bilingual." Gaarder, a leading proponent of the renascent bilingual education movement, called as early as 1965 for a survey instrument to determine the "bilingual dominance configuration" of such students.[2]

Without a simple but systematic method for determining and depicting language dominance, bilingual programs run the risk of becoming "dumping grounds" for pupils characterized by behavioral and/or learning difficulties rather than linguistic differences. Pupil placement by summary teacher opinion is subject to the inaccuracies of unconscious attitudes and skewed knowledge.

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*Speaking of the imprecision of such linguistic labels, Hittinger noted that "a Spanish surname does not automatically mean bilingualism and, on the other hand, an Anglo surnamed child may be Spanish monolingual." [in "Bilingualism and Self Identity", Educational Leadership, 27 (1969), 247.]

Many English-speaking teachers, for example, exhibit the "iceberg effect" in assessing the language dominance of their Spanish-speaking students. That is, they limit their judgments to the linguistic behavior of such pupils within the walls of their traditionally English-only classes, failing to pursue and perceive the extent of these pupils' native language interaction in the home and on the street. When asked to explain her English-dominant rating of a recently arrived Puerto Rican pupil, one such teacher responded: "He doesn't say very much but whenever he does speak to me, he speaks in English."

The need for a more efficient and effective means of assessing the degree of bilingualism for initially screening and placing such pupils remains basically unmet. Scholars have pointed out the complexities and complications of defining and determining bilingualism.[3] MacNamara, for example, stated that "bilingualism is so complicated a phenomenon that one has the giddy feeling that in speaking of it one speaks of all things at once."[4]

Defining Bilingual Dominance

Despite the difficulties in defining and determining bilingualism, the work of such scholars has revealed some key insights. Bordie pointed out that "bilingual students have a dual matrix situation in which the relation of capacity in one area of the native language matrix to the same area of the second language matrix must be considered."[5] MacNamara and Savard have defined the language matrix by analyzing the four basic skills of listening, speaking, reading, and writing into various subskills and levels.[6] Fishman has highlighted the distinction of the varying sociolinguistic contexts, or domains.[7] Mackey has identified and integrated the various elements of bilingualism as well as the several models of bilingual education into systematic

typologies.[8] Sofietti has reminded us to consider the underlying dimensions of biculturalism as well as the more obvious manifestations of bilingualism.[9] But perhaps the most important insight is that bilingualism should be thought of as a continuum,[10] or rather a "whole series of continua."[11]

Determining Bilingual Dominance

Researchers in the fields of psychology and linguistics have developed and utilized a host of measures to determine degree of bilingualism.[12] The most common techniques used in research studies concerning bilingualism involve reaction time,[13] word association,[14] and flexibility tasks.[15] Despite their applicability in scholarly psycholinguistic studies, most of these measures are not readily available or practicable for the school teacher or administrator interested in establishing or evaluating bilingual programs at the elementary school level.

Researchers within the field of education have also produced some instruments designed to determine bilingual dominance. Hoffman developed in 1934 an interview schedule designed to measure the degree of bilingualism in the school and familial background of non-native speakers of English.[16] His instrument has been used extensively in studies involving Spanish-speaking students.[17] However, it tends to emphasize the native-language interaction in the home at the expense of the English-language exposure of the schools. Other researchers have modified and simplified Hoffman's scale while adding various performance rating tasks for a more comprehensive assessment of Spanish-English dominance.[18] Despite their significant productiveness, such interview batteries have somewhat limited practicableness because they necessitate individual administration. Burt has recently developed a promising bilingual measure based on oral syntax.[19] Although a very useful

diagnostic device, the individual nature its administration suggests that it might be more appropriate and applicable as a follow-up rather than an antecedent to pupil placement. Mazón has decreased the dependency on individual bilingual examiners by utilizing a modified version of the Gloria and David test materials in imaginative combination with an audio-visual device.[20] Although a useful teacher-training technique in terms of comprehensive oral language assessment, its widespread use as a pupil placement measure is rather limited by matériel considerations.

Such considerations point to the possible utility of parallel tests of aural ability in the search for a feasible and fruitful pupil placement measure of language dominance. Since most bilingual programs are initiated in the early grades and since they serve students with varying educational opportunities across two languages, measures of aural-oral abilities are of greater efficacy and applicability to assess language dominance than those based on reading and writing. Oral ability instruments necessitate individual administration and often require trained scorers. Thus, a measure of aural ability in each language may prove to be the most suitable as an initial indicator of language dominance.

There is some evidence supporting the value and format of such a procedure. Norman and Mead, for example, found that the degree of bilingualism of a sample of Spanish-speaking subjects, as measured by an individual interview of bilingual background, was directly related to their performance on a measure of aural ability.[21] A study by Andrade et al. demonstrated that picture-type items were particularly effective in measuring the aural ability of elementary-school pupils.[22]

Saville and Troike suggested the use of the Peabody Picture Vocabulary Test in Spanish and English as a useful tool in bilingual programs.[23]

However, its use in assessing Spanish skills alone and, more particularly, in comparing relative competencies in Spanish and English is limited by the different item difficulties and cultural contexts that are "lost in translation."

The use of the oral comprehension test of the Inter-American Series* appears more promising. Developed as a result of studies directed by Manuel, the Inter-American series of parallel tests in Spanish and English were designed "to select test items common to the two cultures and of similar difficulty" so as to provide "comparable measures of ability and achievement in the bilingual situation."[24] These tests consist of multiple-choice pictorial items which the student marks in accordance with orally presented vocabulary stimuli. Although having no emperical guarantee of equivalence* and exhibiting flaws in format (e.g., spacing), the Inter-American tests of aural ability seem to constitute at least a step in the needed direction. In a study involving the administration of one form of the instrument in Spanish and an alternate form in English to a group of Spanish-speaking students in the first grade, Zirkel and Greene obtained evidence indicating the criterion validity of the resulting discrepancy scores. Moreover, their investigation revealed no significant practice effect between the alternate Spanish and English forms and a standard error of difference between the two 25-item forms equalling three points.[25]

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*Viz., the "Oral Vocabulary" subtest of the Tests of General Ability, levels I and II, and the more recent Tests of Oral Comprehension.

"Given the lack of a solid and specific criterion instrument the problem of determining the equivalence of two alternate forms of such a test, each in a different language, remains a perplexing, if not impossible, problem.

Depicting Bilingual Dominance

Graphic depictions will be utilized (1) to review the preceeding discussion regarding the definition and determination of bilingual dominance, as well as(2) to illustrate its application for the purpose of pupil placement in establishing a Spanish-English bilingual program on the elementary school level.

The schematic diagram in Figure 1 summarizes the matrix-like formulation of bilingualism which serves as the conceptual context for the determination and depiction of language dominance. The four basic language skills and the cultural substratum are represented as a series of continua which are interrelated to the sociolinguistic domains and linguistic levels within a three-dimensional matrix. Each continuum can be constituted of quantifiable units in Spanish and English depending upon the dominance measure that is utilized. Each dimension could be further analyzed and segmented (e.g., listening skill into comprehension and phonetic discrimination; speaking skill into pronunciation, intonation, etc.). However, the figure serves to indicate the complex context that constitutes bilingualism.

Bearing in mind the complicated and comprehensive nature of this dual language matrix, the reader is asked to focus on the basic building block of aural ability, labelled in the preceding diagram as "listening." This simplified segment may be visualized, as illustrated in Figure 2, in the form of a continuum bounded by Spanish and English monolingualism and bisected by the relatively limited area of equilingualism, or balanced bilingualism.* Such a conceptualization yields a placement of pupils into three categories typical of bilingual programs: "Spanish-dominant," "English-dominant" and, for the

* The precise points of such divisions are arbitrary, not absolute.

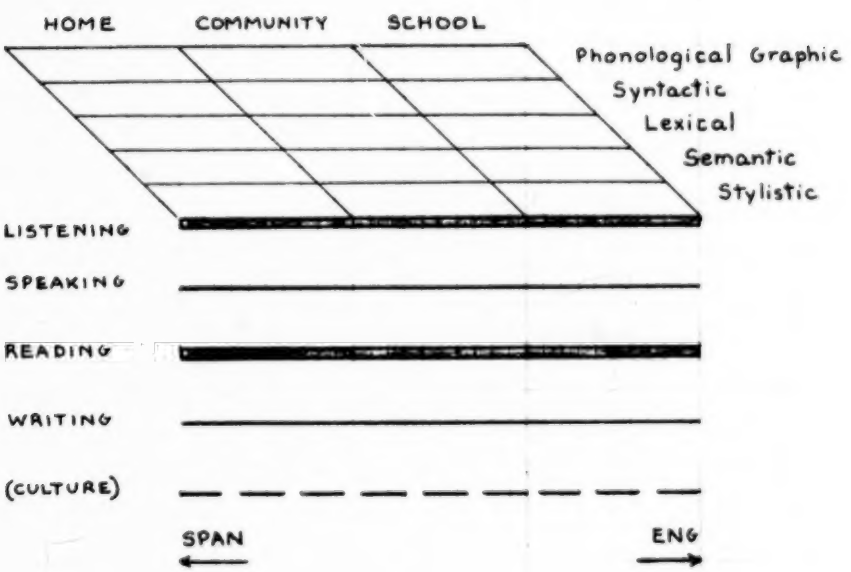
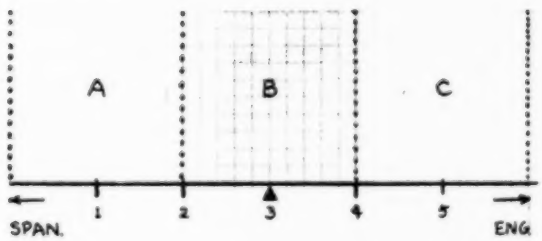


Figure 1: Representation of Bilingual Dominance Matrix



A. SPANISH-DOMINANT

B. TRANSITIONAL

C. ENGLISH-DOMINANT

▲ EQUILINGUAL (or balanced bilingual)

Figure 2: Representation of Bilingual Dominance Continuum: Aural Ability

lack of a better term, "transitional" pupils.* Further, this schema can serve as the basis for a five-point rating scale according to relative competency, which is exemplified below:

Ex. I.
1. Pupil understands spoken Spanish much better than English
2. Pupil understands spoken Spanish a little better than English
3. Pupil understands spoken Spanish and English
4. Pupil understands spoken English a little better than Spanish
5. Pupil understands spoken English much better than Spanish

Similarly, discrepancy scores of parallel tests of English and Spanish can be utilized to form these three programmatic categories. Taking the aforementioned example of the level I Inter-American Oral Vocabulary subtest, which consists of 25 items in both alternate Spanish and English forms, a difference score of six points could be used with 95 per cent level of probability to demarcate the three dominance categories. However, as the following example reveals, such a one-dimensional conceptualization obscures absolute proficiency levels within each language while it clarifies relative proficiency levels:

Ex. II. Results of First-Grade Sample on Parallel O.V. Subtest

	Pupil	Spanish Score	English Score	Difference Score	Dominance Category
1.	Adolfo Jiménez	14	12	+2	B
2.	María Requena	13	5	+8	A
3.	Alberto Hernández	6	16	-10	C
4.	César Cruz	7	6	+1	B
5.	Juanita Pizarro	25	17	+8	A
6.	Etc.				

By means of this categorization pupils 1 and 4 are placed in one dominance grouping (e.g., a transitional class); pupils 2 and 5 are placed in another group (e.g., a Spanish-dominant class); and pupil 3, in a third. Yet in

*Given the prevailing cultural element of our society, the direction of the transition is clear. The typical questions asked of such programs seems to be: "When will you get your pupils into the mainstream?"

terms of aural ability within English, pupils 2 and 4 appear to be at similar proficiency levels, as do pupils 3 and 5. In a like manner, an examination of the Spanish scores reveals a wide disparity in aural ability levels between the pupils (#2 and 5) placed in the Spanish-dominant class.

The culminating conception of aural language dominance, which corresponds in scale to the aforementioned instrument, is given in Figure 3. Figure 3 can be formed by simply swinging the left side of Figure 2 up to form a vertical axis. This two-dimensional conception remains relatively simple, but yields a more systematic categorization of dominance groupings according to absolute as well as relative proficiency. Thus, each dominance category can be broken into subgroups (e.g., A_1, A_2, A_3). By plotting the dominance scores of a sizeable sample of students, dominance clusters will appear which can then be instructed according to the goal of the program.

Pupils in group B_3, for example, might receive content instruction 50 percent in each language in a "true" bilingual program, which aims at full-bilingualism for all participants. Pupils in group C_3 in the same program might initially receive instruction 35% in Spanish and 65% in English on their way to sharing the 50-50 Spanish-English class. However, in a "transitional" bilingual program, the pupils in B_3 and C_3 (and C_2) might be placed together in "regular" monolingual-English classes. The more critical decision would pertain to groups A_1, B_1, and C_1. Whether they should initially be instructed in an intensive English, intensive Spanish or 50-50 program would depend upon the goals of the program (viz., irredentism, maintenance, assimilation) as well as its scope and length. It would appear clear with respect to group B_1, and probable with respect to groups A_1 and C_1 that reading should be postponed until the completion of an intensive readiness program emphasizing Spanish or English.

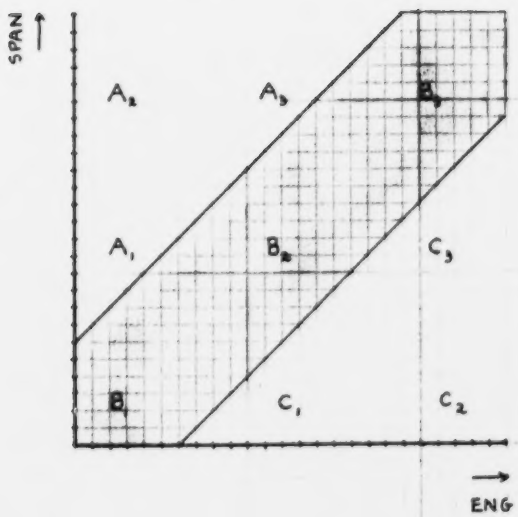


Figure 3: Depiction of Aural Bilingual Dominance: Sample Chart

Simultaneous reading instruction in Spanish and English would appear to be damaging for group B_1 but possible for group B_3. Further illustration of the applications of this method of determining and depicting language dominance can be readily seen by plotting the parallel testing scores of the five pupils listed in Example II (see Figure 4).

In conclusion, the use of parallel tests of aural ability in two languages appears feasible as a means of determining dominance in the establishment of a bilingual education program. Further, the use of a two-dimensional graph consisting of the proficiency levels within each language appears fruitful as a means of depicting such dominance scores in the initial placement of pupils into instructional groupings. However, the complexity of human be - havior across a dual language matrix as well as the limitations of brief group testing preclude anything more than a tentative judgment with respect to any pupil's language dominance, which should be verified by subsequent diagnostic testing and prescriptive teaching. Given the restricted resources of the typical educational setting, the circumspect use of such a method offers a simple and systematic starting point for pupil placement and programmatic progress.

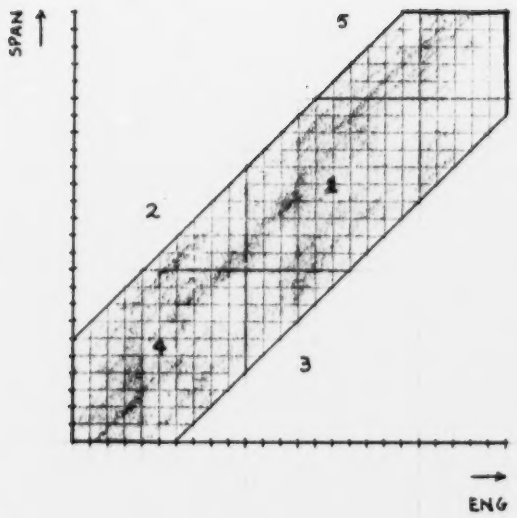


Figure 4: Illustration of Results of First-Grade Sample on Parallel Oral Vocabulary Subtest (Ex. II)

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